

### REMARKS

This is in response to the Office Action of September 28, 2007. Claims 8-14 are amended without change of scope for better conformance with U.S. patent practice. The non-narrowing amendment of claim 10 is based on disclosure in the paragraph bridging pages 8-9 of the specification ("a measuring unit 6, which contains ... a clock 63, which ... is electrically connected to the test unit"). In claim 14, the dependency is corrected. No new matter is introduced by this Amendment. Claims 8-14 as amended are pending in this application and are before the Examiner for reconsideration.

#### The technology of the invention

The present invention provides an apparatus and processing which, by examining the visual functions of the eye under standardized circumstances, make it possible to recognize the early signs of visual damage of ophthalmologic and non-ophthalmologic origin. In one embodiment of this invention, the processing employs periodically moving test images, and the visual function is determined on the basis of detecting the phenomenon of optokinetic nystagmus. Rhythmic, oscillating motions of the eyes are called nystagmus. Optokinetic nystagmus is a reflexive eye movement with target-following slow phases alternating with oppositely directed fast phases. In an alternative embodiment of the present invention, the visual function is determined by measuring critical fusion frequency (CFF) before and after photostress. Specification, pages 4-5.

#### Claim 8

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over US 3,992,087, issued November 16, 1976 (Flom) in view of US 4,545,658, issued October 8, 1985 (Weiss). The rejection is respectfully traversed.

Claim 8 requires among other thing "measuring the time needed for the recovery of the visual function before the illumination." The Examiner acknowledges that Flom does not describe that feature of Applicants' invention. Citing Weiss as disclosing "measuring time timer

30,” the Examiner argues that it is obvious “to provide a timer in to [sic] the Flom visual examination apparatus for the purpose of standard photostress test to the human eye.” The Examiner has failed to explain how the *apparatus* element of a timer disclosed in Weiss makes it obvious to measure “the time needed for the recovery of the visual function before the illumination” as required by Applicants’ *process* claim 8.

Furthermore, the Weiss disclosure relates to a procedure using an extremely short photostress, a flash (less than 1 second), and an apparatus with a xenon lamp. Applicants’ claim 8, in contrast, claims a procedure using long exposure to light for 10 to 300 second and an apparatus with conventional light source emitting continuous white light. The molecular biology processes induced by a long-term light stimulus are significantly different from those induced by a flash light. The latter affects only rodopsin-cycle of photoreceptor cells, while the former also affects melanin movement in the retinal pigment epithelium, choroidal blood-flow, and pupil size and accommodation (i.e. focusing image on the retina) making the long-term stimulus clinically more suitable. Thus, both the process (as well as the apparatus) employed by Applicants differs significantly from the corresponding disclosure of Weiss.

Accordingly, for the reasons set forth above, it is manifest that the Examiner has failed to state a sustainable rejection of claim 8 under 35 U.S.C. § 103(a).

#### Claim 9

Claim 9 is included in the group of claims rejected under 35 U.S.C. § 103(a) as being unpatentable over Flom in view of Weiss. However, in discussing this ground of rejection on page 4 of the Office Action, the Examiner mentions only Weiss. In any case, the rejection is respectfully traversed.

Independent claim 9 requires determining the visual function of the eye by measuring critical fusion frequency (CFF), then inducing photostress by illuminating the eye with an intense light and finally measuring the time needed for the recovery of the visual function before the illumination by measuring CFF. The Examiner has failed to explain how Weiss allegedly shows these three steps. Instead, the Examiner alleges without any details that the subject matter of

claim 9 is “shown in figure 1” of Weiss. Figure 1 of Weiss shows an apparatus, not a process. The Examiner provides no analysis at all of the differences between what is covered by claim 9 and what is allegedly disclosed in the cited prior art.

For his measurement of visual function, Flom uses “spot of light in the view of a subject” and “attenuating the intensity of said spot of light.” That is, Flom uses a “contrast sensitivity” test, which means gradually decreasing contrast of test figure. Contrast sensitivity is defined as the ability to discern between luminosities of different levels in a static image. For his measurement of visual function, Weiss uses “Landolt rings ....to the visual acuity” which means gradually decreasing size of test figures. Visual Acuity is defined as a quantitative measure of the ability to identify black symbols (letters, numbers or Landolt rings) on a white background at a standardized distance as the size of the symbols is varied. The Visual Acuity represents the smallest size that can be reliably identified). In contrast to this prior art, Applicants use critical fusion frequency (CFF) for measuring visual functions. CFF involves gradually decreasing vibration of a test figure. The definition of Critical Fusion Frequency is the rate at which stimuli can be presented and still be perceived as a separate stimuli. Stimuli presented at a rate higher than CFF are perceived as continuous stimuli. Thus, both the apparatus and procedure of Applicants’ invention are for measuring visual function are significantly different from those of Flom and Weiss.

It is manifest the Examiner has failed to state a sustainable rejection of claim 9 under 35 U.S.C. § 103(a).

#### Claims 10-14

Claims 10-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Flom in view of Weiss. The rejection is respectfully traversed.

The Examiner’s discussion of this rejection appears to have omitted a line at the top of page 5 of the Office Action. Based upon the context, it is believed that the Examiner intended to acknowledge that Flom fails to teach a clock and time measuring unit. Claim 10 requires among other things “a clock measuring the time of the examination, a test unit suitable for moving and

changing test images, and a measuring unit electrically connected to the test unit, which measuring unit contains a nystagometer sensing the movement of the eye and a display unit and time measuring unit connected to the test unit.” As noted above, it is believed that the Examiner acknowledges that the Flom apparatus does not include a clock and time measuring unit. The Examiner argues at the top of page 5 of the Office Action that it is obvious “to provide a timer in to [sic] the Flom visual examination apparatus.” The Examiner has not even alleged that it is obvious to modify the Flom apparatus by providing a measuring unit electrically connected to the test unit, which measuring unit contains a time measuring unit connected to the test unit. The Examiner also has failed even to allege that Weiss makes it obvious to modify the Flom apparatus to include “a clock measuring the time of the examination,” as required by Applicants’ independent claim 10.

Flom teaches an “infrared sensor producing a voltage analog signal corresponding to the position of the eye.” Applicants’ claims require an apparatus containing “a measuring unit electrically connected to the test unit, which measuring unit contains a nystagometer sensing the movement of the eye and a display unit and time measuring unit connected to the test unit.” This electric connection between units forms a circuit, which is a significant part of the apparatus. The electric connection forming a circuit represents the technical base (hardware) for communications between these units using digital signals. A software-guided processing of all data enormously enhances efficacy of Applicants’ apparatus. Thus, again, both the apparatus and process of Applicants are significantly different from those of Flom and Weiss.

Accordingly, the Examiner has failed to state a sustainable rejection under 35 U.S.C. § 103(a) of independent claim 10, much less of any of claims 11-14 which depend therefrom,

Contact information

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Richard Gallagher (Reg. No. 28,781) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

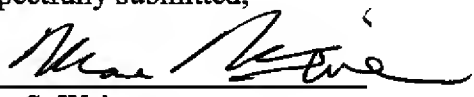
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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